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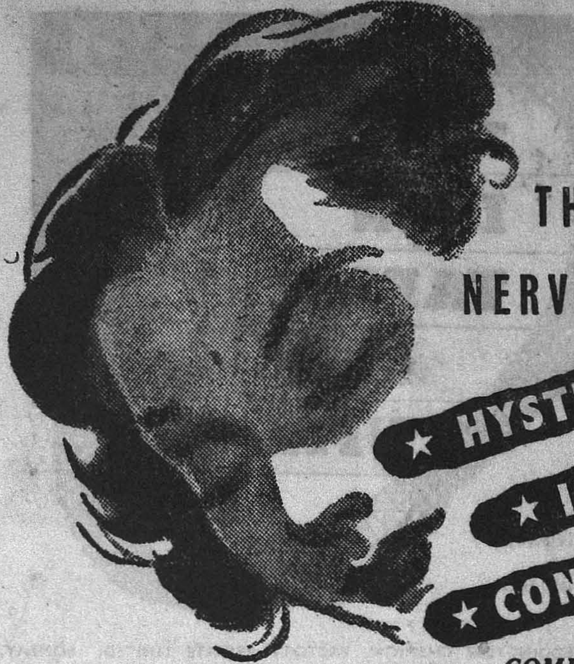

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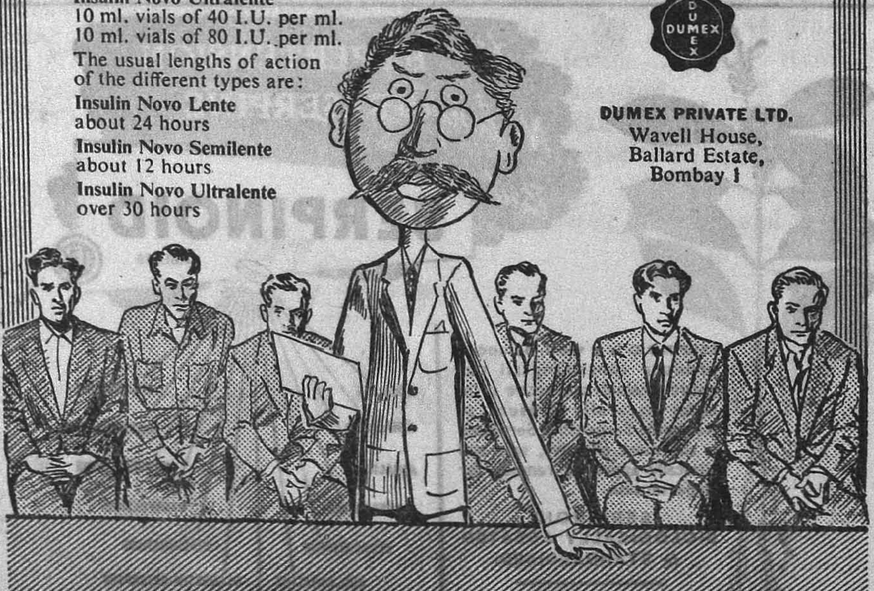

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JOURNAL OF THE MADRAS STATE BRANCH OF THE INDIAN MEDICAL ASSOCIATION

(With which is incorporated the "Miscellany")

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RECENT ADVANCES IN PAEDIATRICS

By

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It is very difficult in an article of this nature to decide on where to start, what to include and what to omit. Advances in Paediatrics have taken place in each and every direction so much so that volumes can be writen on them. I would like to be as concise as possible and shall commence with advances in prophylactic inoculations.

PROPHYLACTIC IMMUNIZATION

Anterior Poliomyelitis

Poliomyelities has always been a frightening disease because it attacks usually young children leaving dreadful after effects in the form of a residual paralysis. It is a disease of under-developed countries where hygiene and sanitation are poor. In such under-developed countries poliomyelitis is present as a sub-clinical infection in most of the children and young adults. This sub-clinical infection confers immunity to adults and children and lessens the virulence of the condition. Only sporadic cases of infantile paralysis, therefore, occur. Better sanitation and hygiene, as seen in the U.S.A. and other western countries, has resulted in the eradication of the disease. But this has a bad effect, too. Immunity against the disease is absent or very little among children and young adults in such countries with the consequence that when the disease strikes it spreads very rapidly and causes either death or serious disabilities in the victims. The Hudson Bay epidemic, in which 60% of the inhabitants were struck by serious poliomyelitis, is an instance. This change in the nature of the disease in western countries has stepped up measures for its prevention by means of prephylactic inoculations. Fortunately, India is still an under-developed courtry and poliomyelitis is not such a serious problem for us to tackle.

The development of the new Salk vaccine against poliomyelitis has raised the hopes of the public and is now occupying the attention of the public health authorities. The temporary catastrophe which came as a setback to its use in the U.S.A.- active poliomyelitis developed in about 40 children after the administration of the vaccine is too well known. Controversy is raging in the U. S. A. as to which of the two vaccines now available for inoculation against

poliomyelitis the Salk and the Sabin vaccines-is better. The two eminent workers in this field-J. Salk and A. Sabin hold opposing views about vaccination against poliomyelitis. Sabin favours the use of attenuated •live vaccine given by the natural route of infection viz. the mouth. He is of the opinion that killed viruses given as inoculations do not confer life-long immunity and that the short immunity confered by such vaccines is dangerous because serious attacks of poliomyelitis can occur in older children and adults when the immunity passes off. He gave the vaccine to chimpanzees and 26 young volunteers by the oral route and no ill-effects were noticed. Immune bodies appeared in the blood. Salk, however, is of the opinion that attenuated living viruses may be reactivitated in the tissues and assume a virulent form. He believes that formaldehyde-killed viruses given parenterally will give a better protection and that a booster dose given at later life will confer life-long immunity. Only time will settle this controversy.

Infectious Fevers—Whooping Cough, Diphtheria, Small-pox etc.

Chicken-pox, mumps and German measles are mild infections in childhood, but serious if contracted in later life. No protection is advisable against these diseases as it is better to suffer from them during childhood itself. Whooping cough, diphtheria and measles are, however, serious ailments if contracted within the first three years of life. Two thirds of deaths from whooping cough occur in children below one year and two thirds of deaths from measles between six months and two years. The reason for the severity of whooping cough in childhood is because of the lack of antibodies against this disease in mothers. Beacuse of the seriousness of diphtheria and whooping cough in childhood active immunization is advocated in early life. After the first injection of the antigen, antibody rises slowly to its maximum in three weeks. With a second injection given now antibody concentration rises still higher. A third or booster dose is given after a varying interval-usually the fifth year of life when the child begins to attend school.

A combined injection of diphtheria-toxoid and pertussis is given nowadays. By combined immunization it has been observed that the effect of the diphtheria-toxoid is enhanced i. e. the antibody production is higher. At the same time the effect of the pertussis vaccine is not lowered. Another interesting observation noted in active immunization is as follows:-If a child gets a prophylactic inoculation diphtheria and at a subsequent date given prophylactic inoculations against diphtheria and whooping cough, the whooping cough vaccine given now does not cause any reaction in the child and is of no value. No antibodies are formed, nor immunity produced. In giving active immunisation, therefore, it is advisable to decide on a definite course of action beforehand and give the vaccines either singly or in the combined forms and never to give first the single and then the combined vaccines, because one component of the combined vaccine is then of no value.

It may be mentioned here that alum containing vaccines eg. alum containing diphtheria toxoid, singly or in combination with pertussis vaccine, is extremely dangerous because it may precipitate post-inoculation poliomyelitis. The paralysis affects the limb in which the inoculation has been given. It is thought that the injection activitates pre-existing latent infection in the child and the trauma to the motor cells localises the infection to the motor nerve cells associaied with the muscles in which the inoculation has been given. It is, therefore, preferable to give subcutaneous injections to intra-

muscular ones and to avoid alum containing vaccines. During periods when poliomyelits is prevalent in a locality prophylactic inoculations should be suspended and other injections restricted. Of late vaccines against diphtheria, whooping cough and tetanus have been combined together so that with one inoculation immunity can be obtained aginst all the three diseases.

A view that has now been gaining ground is that the site of production of antibodies is the lymph glands draining the site of injection and not so much the reticulo-endothelial system. Overgrowth of lymphoid tissues and tonsils are, therefore, found to be of protection against infections. Removal of tonsils has in particular been found to be associated with an increase in the incidence of bulbar poliomyelits. The pendulum has now swung back in the direction of keeping the tonsils intact, unless of course there are definite indications for their removal.

Small pox vaccination should be done before the first year of life and repeated about the tenth year, or earlier if necessary eg. during increased incidence of small-pox in a locality. Primary vaccination in older children carries with it the serious risk of post-vaccinial encephalitis. Vaccination should not be done if the skin is unhealthy because of the risk of dissemination of virus.

Tuberculosis

Tuberculosis has been a scourge of the world, especially in the underdeveloped countries. Methods to prevent it by prophylactic inoculations are being developed. With the introduction of streptomycin, paraamino salicylic acid and isoniazid for the treatment of the condition, much of the fear with which the disease was held has now been shed. B.C.G. Vaccination is now occupying the attention of public health authorities, physicians, phthisisologists and the lay public all over the world. This vaccination has raised a great controversy in this country. I do not propose to enter this controversy. I shall, however, give a summary of the findings of the Medical Research Council, Great Britain, which will be of interest. 56,700 Children between the ages of 14—15½ years attending school were chosen for the investigation. A comparison was made between (1) children showing a positive reaction to 3 tuberculin units to whom, because of the positive Mantoux test, no B.C.G. Vaccination was given this group comprised 28% of the total number; (2) children showing a positive reaction to 100 tuberculin units to whom no B.C.G. vaccination was given for the same reason as stated in group I. This group comprised 12% of the total; (3) tuberculin negative children left uninoculated thereby acting as controls—there were 13,300 children in this group; (4) negative children who were given B.C.G. vaccination—there were 14,100 such children and (5) 6,700 negative children vaccinated with the vole bacilus. The cases were followed up for 2½ years. 99.6% of the tuberculin negative reactors who had received B. C. G. vaccination and 94.6% of the negative reactors who had received vole-bacillus vaccine became positive after the inoculation. In the group which received B. C. G. vaccination the incidence of tuberculosis was 0.37 per 1,000, while it was 1.94 per 1,000 in the unvaccinated group and 0.44 per 1,000 in the group which received the vole-bacillus vaccine. Incidence of tuberculosis was 2.93 per 1,000 in those who reacted to 3 tuberculin units and to whom no B. C. G. vaccination was given and was 0.74 per 1,000 in those who reacted to 100 tuberculin units. Moreover, no cases of miliary tuberculosis or tuberculosis meningitis occured in the vaccinated children, whereas in the unvaccinated group of negative

reactors 3 cases of tuberculous meningitis and 3 cases with miliary dissemination were seen. B. C. G. vaccination, it will be noted from the above observations, definitely reduced the incidence of tuberculosis. Children who showed a strong tuberculin reaction viz. 3 tuberculin units, and were, therefore not given B.C.G. vaccination, that is children who had received a natural primary infection, showed a high incidence of tuberculosis in later life—this group fared worse than even the unvaccinated negative group. It is, therefore, obvious that a naturally acquired immunity has a serious draw-back in that the grade of the infection cannot be controlled. This may result in the development of severe infections in such children. With artificial immunity—that following B. C. G. vaccination—the dose of infection is controlled and untoward complications thus avoided. The only abmormal reactions seen after B.C.G. vaccination were regional adenitis, cold abscesses and a delayed healing of the site of vaccination. 22% of children who received the vole-bacillus vaccine developed a lupus-like reaction. The conclusions we can draw from the study of the findings of the Medical Research Council are as follows: Since 40% of children showed positive tuberculin reaction at the ages of 14-15½ years and since such children showed a high incidence of active tuberculosis after a year or two, tuberculin testing of children should be done at an earlier age, and if they are negative, B.C.G. vaccination given. Such vaccination should be given in particular to children exposed to the risk of infection eg. those born of tuberculous parents or come in contact with open cases. Artificially given immunity in such cases will give better immunity than the naturally acquired one, where the severity of primary infection cannot be controlled.

The value of prophylactic isoniazid in preventing the progress of post-primary complex in children has now been accepted. 5—10 mgms. per pound of body weight per day is the recommended dose. A total of 100 mgms. can be given daily. The drug is well-tolerated by children, the toxic effects being minimal. The advantage of this prophylactic measure is that the immunity so acquired is a natural one, in which the defence mechanism of the body has played an important part. In countries with low tuberculous mortality and morbidity eg. the Scandinavian countries, there is a move to introduce isoniazid therapy in place of B.C.G. vaccination.

Leprosy

B. C. G. vaccination is beneficial to the receiver in one other way as it has been found to be value of in the prevention of leprosy. It is well-known that mild tuberculisation of a community helps in preventing leprosy. Tuberculous patients do not usually suffer from leprosy, whilst lepers invariably develop tuberculosis as a complication. The stronger acid-fast bacillus prevents the entry of the weaker one into the body, while the weaker one paves the way for the stronger acid-fast bacillus to attack the body. It is on this principle that it is now realised that B. C. G. vaccination will be of help in preventing leprosy.

Rheumatic Fever

Trials show that the early administration of penicillin in adequate dosage to all cases of sore throat is effective against streptococcal infections and diminishes the likelihood of rheumatism developing as a sequel. Fortunately such a procedure is followed by most of the practitioners in our country. It is a well-known axiom that one attack of

rheumatism is always followed by another attack after a varying interval. Each attack leaves the heart in a weaker state than what it was before. One of the main principles in treating acute rheumatism nowadays is to prevent the occurrence of repeated attacks. For this purpose two measures are available. Prophylactic sulphonamides, I Gm. a day, given for many years or given during the months of necessity eg. winter months, when the incidenee of sore throat is high, has been found to be of value in preventing or aborting the attacks. Oral penicillin, 200,000 to 300,000 units a day can also be given, but the absorbability of this antibiotic by the oral route is not certain as it is destroyed by the acidity of the stomach. Penicillin V - a new preparation which has been introduced recently, is found to be very effective even by the oral route as it is not destroyed by the acidity of the stomach. Whilst oral penicillin is preferred to oral sulphonamides because of the greater efficacy and less toxicity of the former, oral administration in general has one big disadvantage i.e. the patient has a tendency to forget to take his drug when he is all right. Penicillin injection is, therefore, preferred to oral penicillin. Benzathine penicillin (Penidure) or the long-acting penicillin can be given once a month and is an effective prophylactic against rheumatism. The only disadvantage of benzathine penicillin is the pain at the site of injection. The monthly dose of benzathine penicillin is I. 5 megaunits given by the intramuscular route.

Sodium salicylate is still the most effective drug in the treatment of rheumatic fever. Previously it was combined with sodibicarbonate to prevent nausea and vomiting and to promote its rapid excretion so that toxic mainfestations may not develop. But a few physicians are now of the opinion that sodium salicylas should be given alone without combining it with sodium bicarbonate, as it is better absorbed thus. Corticotrophin (A.C. T. H.) and cortisone therapy have been tried extensively for the treatement of rheumatism. The Medical Research Council of Great Britain and the American Heart Association find that there is no difference between cortisone and salicylate therapy. Holt, however, noted a more rapid return to normal of the Blood Sedimentation Rate with cortisone therapy. In severe cases combined cortisone and salicylate therapy is of value in acute rheumatic conditions.

NEONATAL ASPHYXIA

A great change has taken place of late in our conception of the administration of oxygen to resuscitate babies with impaired respiration. It is well-known that respiratory failure is the commonest cause of death within the first few days of life. This is because respiration is an entirely new function which the new-born baby has to learn. It is very interesting to note the experiments of Barcroft who opened up the pregnant uterus of an ewe under spinal anaesthesia and delivered the amniotic sac into warm saline. This and other experiments showed that in-utero the respiratory system of the foetus is in full activity and that regular respiratory movements occur. Liquor amnii is drawn into the lungs and is also absorbed by the lungs. The significance of the presence of liquor amnii in the lungs is discussed later. Extra-uterine breathing is only a continuation of the intra-uterine respiratory movements, the only difference being that oxygen takes the place of liquor amnii. But this difference is of paramount importance to the child. The first

respiratory movement of the child when outside the uterus, however moderate this movement may be, draws in air. Air which is more diffusable than liquid, expands the lungs and great expansion of the alveolar spaces follows. This results in the liquor amnii, which is already in the alveolar spaces, to become only a neglibible fraction on the total alveolar spaces, and is absorbed with great ease. The liquor amnii which was present in the lungs at birth has its own utility. It prevents the cohesion or stickiness of the surfaces and hence acts as a lubricant. It favours the diffusion of air and promotes the expansion of lungs following the birth of the child.

As stated before rhythmic respiratory movements start early in intrauterine life i.e. the respiratory centre of the foetus matures very early in life. In contrast to this, the development of lung structure is slow and not completed till term. Viability of the foetus depends largely on the maturity of the lung and it is the poor development of the lung which is often the cause of death due to neonatal asphyxia.

Management of Neonatal Asphyxia

Aspiration of fluid to remove the thick mucus which may obstruct the respiratory passages or keeping the baby with the head down have been found to be of value in a few cases. The value of any measure depends primarily on whether the infant has taken spontaneous breathing or not. The rocking method of Eve has, of late, been found to be of value for starting healthy respiration. Rocking the child moves the air in and out of the lungs, with gravity playing an important part. It is very effective in resuscitating less severe cases where lung expansion has taken place to some extent. It is not of any use in the infant with unexpanded lungs. Lobeline 3 mgms. (gr. ½) is also of value in hypoxia, but not in cases with severe apnoea. Oxygen inhalation—intermittent application with low and high pressure, and intratracheal oxygen are of extreme value in resuscitating the apnoeic infant. But this method has certain disadvantages which are discussed later. In order to circumvent these disadvantages a new method of oxygen administration has now been tried with success.

Intra-gastric Oxygen Therapy

Use is made of the extensive surfaces of the stomach and intestines to promote the absorption of oxygen. The idea was first investigated by Ylppo who observed that certain fish depend entirely on swallowed air for their oxygen requirement. He found that 5% of the body's oxygen need can be absorbed from an adult's stomach. To quote from the "Recent Advances in Paediatrics", "That significant amounts of oxygen are in fact absorbed in this way seems unquestionable when the method is tested in practice. Apnoeic infants with deep cyanosis are generally changed within a minute into pink but still apnoeic infants, and after a further interval breathing begins. In more severely hypoxic infants with pallor and tonelessness a different sequence of events is seen; after a few minutes of gastric oxygen, breathing begins, gasping at first, and then gradually normal colour is attained." The simplicity of this method enables it to be used in western countries by midwives in their domicilary practice. Two tubes are passed into the stomach-one is the inlet and the other outlet. The stomach contents are first aspirated and oxygen flow started. Oxygen passes rapidly throughout the gastro-

intestinal system and may escape throuih the anus. Excess oxygen will come out of the outlet tube and if more concentration of oxygen is required the escape of oxygen may be prevented by means of a face mask.

PULMONARY HYALINE MEMBRANE

One of the complications seen in premature infants is the development of a pulmonary hyaline membrane, which is now thought to be formed as a result of oxygen administration. As has been stated before, the lungs are less developed than the other organs in premature infants and are, therefore, very delicate structures. In a case where pulmonary hyaline membrane formation takes place it is noted that the premature infant starts breathing, but after a varying period the respiration becomes irregular and laboured with marked rib retraction. Apnoea and cyanosis develop and the infant dies after two or three days. If life can be prolonged to four or five days the condition of the baby improves and complete recovery takes place. On post-mortem examination the lungs are found congested and large and sink in water. A homogenous eosinophilic membrane lining scattered areas of air spaces, with secondary atelactasis of lungs is noted. The secondary atelactasis is different from primary atelactasis in which air has never entered the alveolar spaces. The membrane is found to be rich in polysaccharides, with no protein, very little mucus and a variable amount of lipoids. It is thought that the secretion of respiratory bronchioles is concerned with the transference of oxygen from the lungs to blood in these premature infants-the richer the oxygen concentration the more the secretion and therefore, membrane formation. Drying of respiratory epithelium, due to the administration of oxygen without water, is another factor which is responsible for the membrane formation. It is also thought pulmonary oedema and an excessive secretion of the respiratory epithelium leading to the formation of the membrane may be due to the irritation caused to the immature alveolar cells by oxygen administration. One of the methods of avoiding the development of the membrane is by means of aspiration of the stomach and the respiratory passages and by giving intra-gastric oxygen. In Buffalo, U. S. A., a severe curtailment of oxygen administration resulted in a reduction of the incidence of the condition.

RETROLENTAL FIBROPLASIA

Oxygen administration has been implicated in yet another condition viz. retrolental fibroplasia, which has come into prominence recently. Ocular changes eventually leading to blindness are seen in premature infants. The eye changes are divided into two stages. In the acute stage the retinal blood vessels become dilated and tortuous. Haemorrhages occur and these haemorrhages spread into the vitreous with eventual seperation of the retina. The second stage takes place after several weeks with organisation of the vitreous and the formation of a retrolental membrane. Total blindness then results. Intermediary stages like impairment of vision, squint, nystagmus and partial blindness may also develop depending on the stage at which the disease has been arrested. In many cases spontaneous regression with no serious residual damage takes place. The progress of the condition is, therefore, very variable. Retrolental fibroplasia is a condition seen mostly in under-nourished children (below 5 lbs.) and is said to be the commonest cause of blindness in children below school-going age. This condition has not been recognised so

well in our country probably because its importance has not yet been fully realised. Retrolental fibroplasia is now known to be connected with oxygen administration. It is not the oxygen itself which is so much responsible for it as is the sudden oxygen withdrawal. Excessive oxygen inactivitates an oxidation enzyme resulting in decreased metabolism and decreased oxygen utilisation by tissues. Sudden withdrawal of oxygen results in anoxia, but the enzyme does not readjust to this changed condition. It remains at the same high level. Delicate organs like the eyes are thus affected. The incidence of the condition has fallen considerably in England, Holland and Australia since indiscriminate administration of oxygen to premature children in these countries was restricted. Since the condition is not seen in all premature children who are given oxygen, other factors may also be of importance in producing it, in addition to oxygen administration and withdrawal.

GASTRO - ENTERITIS

This is a very serious ailment in childhood and results in servere vomiting and diarrhoea with rapid fluid and electrolyte depletion. It is rare among breast-fed children because of the higher acidity of the stomach in such children, the acidity destroying most of the pathogens. Viruses, the salmonella group of organisms, protozoae can cause gastro-enteritis. But recently B. coli type O III has been found, on epidemiological evidence, to be the commonest cause of gastro-enteritis in infants and young children. Infection with these organisms usually affects a restricted age group viz. infants and young children. The extreme rapidity with which the disease spreads is a characteristic feature of the condition. It is well-known that a mild diarrhoea starting in a nursery may spread from case to case increasing in intensity and virulence causing severe illness and deaths among many infants. Bacteriological and clinical screening of all infants admitted in a hospital, and isolating those children whose serological reaction or stool culture show evidence of E. coli O III infection, resulted in a dramatic reduction in the incidence of gastro-enteritis in Birmingham.

The treatment of the condition comprises of two aspects: (1) the fluid loss must be restored and electrolyte disturbance rectified; (2) the infection controlled by means of sulphonamides and antibiotics. A few cases respond very well to sulphonamide therapy. Chloramphenicol, though dangerous, has also been found to be of value in acute gastro-enteritis, and it is better than aureomycin. The results with streptomycin (oral) therapy is variable. Neomycin has, however, been found to be most effective not only for producing a clinical cure, but also as a prophylactic measure when administered during an epidemic. Such prophylactic administration should be limited only to babies exposed to the risk of infection and during epidemic periods, because the antiobitic may suppress the growth of the normal intestinal flora which is of importance to the developing infant. A clinician should not expect one drug to be effective in every case. If bacteriological investigation of the faeces is not possible, clinical deterioration in the condition of the child or lack of response to treatment is an indication for a change in the line of treatment and the substitution of one antibiotic with another.

FLUID AND ELECTROLYTE DEPLETION AND THEIR REPLACEMENT

Fluid and electrolyte depletion is very common in infancy and childhood

because of the high incidence of diarrhoea and vomiting among them. Water depletion, without an associated electrolyte disturbance, is usually due to a deficient intake of water and occurs for example in comatose children. This is relatively rare. Water depletion associated with electrolyte disturbance is seen more often in paediatric practice. One reason for this is the relative immaturity of the kidneys and the liver in children. This results in an imperfect regulation of electrolyte balance. Moreover, in infants the daily fluid requirement is porportionately higher than with adults (as will be seen from the table given below) and this high requirement decreases with age:

Age in years	Weight Kgm.	Water c.c/kgm.	Sod. Chl. Gm./24 hrs.	Proteins Gm /Kgm.	Cals./ Kgm.
—1	2—10	150	0·5—1 0	1·5	60
1—2	10—13	120	1·5	1·0	55
4	15—20	80	2·0	1·0	40
10	30—40	50	3·0—4·0	0·6	30
Above 10	30	45—30	6 0	0 6	25

It is obvious from the above table that the daily water requirement of an infant weighing 20 lbs. is 1,500 cc., whilst that of a child aged 10 years weighing 60 lbs. is only 900 cc. Similarly the protein and calorie requirement per kgm. of body weight of a child decreases with age. In contrast to the above sodium is the only one which increases with age. Besides these, in infants one half of the normal extra-cellular fluid is replaced daily by excretion and absorption, whilst in the case of adults the daily intake and output of fluid is only 1/7 of the total extracellular fluid. All these factors, besides the higher incidence of diarrhoea and vomiting in children, lead to the high incidence of fluid and electrolyte disturbance in childhood. It may be mentioned here that sodium is the main electrolyte in the extra-cellular (plasma and intertitial fluid), while potassium is mostly ntracellular.

Diarrhoea tends to produce acidosis because of the loss of alkalis in the form of bile, secretions of pancreas and intestinal mucosa. It has been established that in severe diarrhoea potassium leaves the cells and is lost by the body. Sodium takes the place of potassium inside the cells. Administering more sodium to these infants in the form of normal saline only results in a greater accumalation of sodium in the cells. The potassium loss is thereby not corrected. Vomiting results in alkalosis because of the chloride loss with vomitus. In such cases saline solution will be of value by supplying the chlorides. It will be very difficult to come to a judgement regarding the electrolyte required for treatment especially so when there is an association of diarrhoea and vomiting. Dry tongue, scanty urine reduced intra-ocular tension, wrinkled skin, cramps in limbs etc. are all suggestive of fluid loss. The deep sighing respiration (Kussmaul's) is suggestive of acidosis. Extreme muscular weakness is suggestive of potassium loss. Apart from the clinical findings which help in the diagno-

sis of a particular electrolyte deficiency, an estimation of plasma sodium, chlorides and urinary chlorides gives an indication towards the treatment required.

Choice of fluid.

Nowadays we have at our disposal (1) water; (2) glucose solution; (3) normal saline; (4) glucose with saline; (5) solutions specially used to combat acidosis and alkalosis; (6) proteins in solution; (7) plasma or blood. Water is, of course, essential to combat dehydration. Glucose supplies the necessary calories. But both these solutions do not supply electrolytes. Normal saline is useful in vomiting, but is harmful in diarrhoea cases because it does not supply potassium and also results in the further retention of sodium in the cells. For diarrhoea we now use Hartmann's solution which contains sodium, potassium, calcium and magnesium chlorides and sodium lactate. The potassium in Hartmann's solution is eight times that in intracellular fluid. Darrow's solution is another modification of Hartmann's solution. The sodium lactate in these solutions is split into sodium and latic acid, the former combats the ketosis and the latter supplies energy because of its oxidation. These solutions are nowadays preferred for replacement therapy instead of glucose or glucose-saline solutions. They can be given intravenously, orally, subcutaneously or intratibially.

HYALURONIDASE

In the case of children the use of this "spreading factor" helps in the rapid absorption of fluid and electrolyte. It is especially useful in the case of children with collapsed veins. 1 mgm. of the powder is used with each injection. Large quantity of fluid can then be given subcutaneously with no danger of localised lump formation. Pain is also less than with ordinary subcutaneous injections. The only danger with hyalase therapy is a "woody oedema" when the skin becomes stretched and tense and does not pit on pressure. I find hyaluronidase extremely useful in paediatric practice.

COELIAC DISEASE

A brief reference may be made to Coeliac disease-a sprue-like syndrome seen in children. This condition, which is very rare in India, is associated with a failure to thrive, fatty diarrhoea, hypotenia and distension of abdomen. Dicke and others demonstrated in 1953 that gluten in wheat starch acts as a poison which hinders the absorption of fat. Gluten-free diet is now used in the treatment of Coeliac disease with very good results. This discovery opens up the possibility of other single components in the diet giving rise to disturbances in the system.

INTRACARDIAC SURGERY

Advances in cardiac surgery are taking place at a rapid rate. Two methods employed now are of value in surgical procedures. These are (1) Hypothermia or the cooling method and (2) the extra-corporeal heart-lung method. These methods allow the heart to be excluded from normal circulation for a period of ten to fifteen minutes, thus allowing the surgeon to make an incision into the heart and operate under direct vision. Mitral stenosis and patent ductus arteriosus are cardiac lesions which are very amenable to surgery. In the case of the former the valves are approached through the auricular appendage, the finger being the best instrument. Operations into the ventricles are more difficult because of the higher pressure in them which

causes profuse bleeding. Moreover, there is a relative absence of connective tissue in the ventricular wall and sutures inserted into the ventricles, therefore, cut out very easily. An associated myocarditis will make operations on ventricles still more difficult. Aortic stenosis is a serious surgical risk, the operations being less successful than similar operations on mitral and pulmonary stenosis. An associated calcification of aortic valves, which is invariably present, results in operations on aortic stenosis leading to aortic regurgitation. The degenerative changes which take place in the myocardium in aortic lesions because of the poor coronary blood circulation, make operative mortality very high. Intra-atrial septal defects are now tackled by the surgeons with very good results. This is because the auricle is a thin-walled chamber. Inter-ventricular septal defects are not so easily amenable to surgery because, as has been stated before, the ventricles are very muscular chambers with poor connective tissue. Repair of leaky valves eg. mitral and aortic regurgitation, have been tackled by surgeons with disappointing results.

HAEMOLYTIC DISEASE OF NEWBORN

This is a condition seen in infants who are Rh + born of Rh negative mothers. The life-span of the red cells of the new-bern infant with this condition is shortened due to the action of specific antibodies derived from the mother and passed to the foetus through the placenta. In Rh negative women transfusions of blood are far more effective stimuli for antibody production than even repeated pregnancies. Clinically the condition manifests as follows;

Foetus:—1. Macerated foetus with cirrhosis of the liver;

2. Hydrops foetalis—Infant still-born or dies within few hours after birth. All the organs are oedematous and serous cavities full of fluid. Anaemia is also present.

Infants:—1. Congenital haemolytic aneamia of the new born, when anaemia is the main manifestation. This is the mild type.

2. Icterus gravis neonatorum—the more serious type.

Icterus gravis neonatorum

In this condition jaundice is present from a few hours after birth. Enlargement of the liver, spleen, kidneys and suprarenals i.e. a persistence of foetal centres of erythropoiesis occur. A varying degree of anaemia is an important feature. Prothrombin level is low. After about 36 hours signs of kernicterus develop. Kernicterus is the yellow staining of the basal nuclei of the brain. It may be evident clinically in the form of a certain degree of spasticity which may be present at birth. Mental defectiveness and athethoid movements may develop later, especially in severely jaundiced infants. The children fail to develop normally. Deafness is a common sequel. The later the onset of these signs of cerebral damage the better the chances of survival of child.

The diagnosis of these conditions is made from the clinical features; the negative Rh test of the mother and the positive Rh of the infant; the direct antiglobulin test - a negative test implies that the child is not suffering from haemolytic disease of the newborn; and cord haemoglobin estimation which is the most valuable test and gives an indication of prognosis and treatment. It has been found that it is common for infants with haemolytic anaemia to be born

normal at birth and therefore, a normal cord haemoglobin should not be used by itself to judge prognosis or withold treatment. On the other hand, the finding of a low cord haemoglobin concentration virtually establishes the diagnosis of haemolytic anaemia, since there are very few other conditions which cause aneamia in the new-born infant. The lower the haemoglobin concentration of the cord blood the less is the chance of survial. A low haemoglobin concentration of less than 13.6 Gm,/100 cc. can be taken as abnormal. Plasma bilirubin concentration also gives a rough indication of the severity of the condition. The higher bilirubin content and the lower the haemoglobin concentration, the worse is the prognosis.

Treatment.

The rapid development of jaundice is an extremely important sign in haemolytic diseases, since the attainment of dangerously high concentration of bilirubin in the blood damages seriously the brain. It is an indication for immediate exchange transfusion. Early exchange transfusions can reduce the incidence of kernicterus. At all levels of low cord haemoglobin concentration the infant treated by exchange transfusion is more likely to survive. The indications for immediate exchange transfusion are as follows:

1. Birth weight 6 lbs. or infants born three weeks before the mother's expected date of delivery in a Rh negative mother;

2. Past history of Rh mother having delivered three affected children;

3. Low haemoglobin concentration in the cord. If the cord haemoglobin is above 17.5 Gm. the infant is unlikely to develop kernicterus. Cord haemoglobin below 15.5 Gm. should be considered low.

The object in exchange transfusion is to remove most of the infant's own red cells and to replace it with an adequate concentration of Rh negative red cells. Usually 60 cc. per pound of body weight is needed. Umbilical vein is used for the removal of the infant's blood and in a few cases the saphenous vein is chosen. The umbilical vein cannot be used 48 hours after birth. Alternate withdrawal and infusion of blood is done till a total of 600 cc. is given.

SUDDEN DEATH IN CHILDHOOD

Sudden deaths in infancy and childhood are well-known to all paediatricians. Till now it was thought to be due to asphyxiation by bed clothes or pillows. Inhalation of vomitus or food was next thought to be the cause of sudden deaths. The finding of vomit and food material in the respiratory passages seem to confirm this. But the food material may be present in the respiratory passages as a result of regurgitation due to death agony. Fulminant infections producing rapid death is now thought to be the cause of sudden deaths in children.

INFANT FEEDING

It is now the view of all paediatricians not to force food on the infant. In western countries it has been the practice till now to feed the child by the clock every three or four hours. This practice is now being abandoned. It is realised that it is best to feed the infant whenever he feels hungry, which he expresses by crying. It is surprising to note that the infant expresses his hunger more or less regularly, every three or four hours.

CONCLUSIONS

Paediatrics is a young subject rapidly assuming importance. I have dealt with many aspects which I felt is of importance. The problems of the young are very peculiar. In Paediatrics we are quite often faced with the problem of diagnosing conditions without any history being available. The youngand innocent children look to us for their health and it is but correct that we should harken to their cry:

"Protect me - ye of larger growth
Hear my appeal : Please take my hand,
And lead me safely through the days
Of Childhood into Grown-up Land."
(Anon)

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HAZARDS OF ANTIBIOTIC THERAPY

By :
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The first consideration for physician is primum noncere, i. e., not to do harm.

Every one is familiar with the uses of Antibiotics. It is paramount that we must be familiar wit the various side effects of the Antibiotics, lest we may not meet with suprises. This article is therefore, intended to give on overall picture of the toxic mainfestations in Antibiotic therapy. The readers are requested to make good any omissions.

First we take "PENICILLIN", the most commonly used Antibiotic. The following table gives an idea of the various varieties of Penicillin available and their side effects.

ANTIBIOTICS AND THEIR TOXICITY

Name of the Antibiotic & Discoverer	Varieties	Toxic symptoms
	Natural	
Penicillin by Sir Alexander Fleming.	1. Penicillin G	1. Due to systemic administration
	2. Penicillin K	2. Due to local administration
	3. Penicillin X	3. Occupational contact.
	4. Penicillin F	4. Ill effects due to alteration of flora.
	5. Penicillin Dihydro F	
	Synthetic	*Systemic*
		A. Allergic :
	1. Benzyl Penicillin G	1. Urticaria and other dermatoses
	2. Penicillin O is a variant of G	2. Angioneurotic oedema
	3. Procaine Penicillin	3. Bronchospasm
	4. Penicillin Aluminium Monosterate (PAM)	4. Eosinophilia
	5. Penicillin in oil & beeswax	*B. Anaphylaxis*
		1. Respiratory failure
		2. Peripheral circulatory failure
		3. Oppression in the chest
		4. Cyanosis.

	C. Nervous systems
6. Benzathine Penicillin (Penidural)	1. Dizziness
7. Penethamate hydriodide (Estopen)	2. Perverted taste (puraguesia)
8. Di-benzyl-ethylene-diamine dipenicillin G. (Bicillin)	3. Cacoguesia (bad taste in the mouth)
9. Compenamine	4. Shock
10. Hydrabamine Penicillin	5. Pyrexia
11. Penicillin with anti-histamine (Neopenyl)	*D. Collagen disorders*
12. Phenoxymethyl penicillin (Penicillin V)	1. Polyarthritis Nodosa
13. Benzyl Penicillin with Probenacid (Benemid)	2. Serum Syndrome
14. Penicillin with other antibiotics and chemotherapeutics, e. g. Diprocin, Estomycin, Sulphapenin etc.	3. L. E. Phenomenon.

II. Toxic Symptoms produced by local administration:

A. Oral use: 1. Black hairy tongue 2. Glossitis. 3. Moniliasis.

B. Intrathecal administration may produce a septic meningitis causing headache, vomiting and convulsions.

C. Skin: 1. Eczematus contact dermatitis. 2. Urticaria. 3. Pseudo cellulitis.

D. Eyes: 1. Retinal damage. 2. Lenticular opacities.

E. From mucous membrane by absorption either by oral route or vaginal route may produce anaphylactoid reactions.

III. Occupational Contact: Nurses and workers in Penicillin Factories may get Contact Dermatitis.

IV. Due to alteration of flora: 1. Moniliasis. 2. Black hairy tongue. 3. Diarrhoea.

Hypo Allergic Penicillins: (1) Penicillin (O) is used because of the onion-like odour) (2) Compenamine. (3) Phenoxymethyl penicillin.

The following table gives the number of cases of reaction with Penicillin met with in my practice:—

Toxic

Total number of cases who had reaction: 38.

Allergic	Anaphylaxis	Local			Intestinal
		Skin	MM	Thecal	
Urticaria and Bronchospasms six cases	One had peripheral circulatory failure.	Contact dermatitis 10	4	1	16

Treatment of Penicillin reactions: It is always advisable to obtain a family history of Eczema, Asthma or Besnier's Prurigo Asthma Complex before administering Penicillin.

The following drugs are to be ready at hand :— 1) Adrenaline and Nor-Adrenaline. (2) Nikethamide and atropine. (3) Sandoston with Calcium. (4 Aminophylline. (5) A. C. T. H. (6) Tracheotomy set to combat laryngeal oedema.

Antibiotic II	Toxic manifestations.
Streptomycin by Dr. Waksman from Streptomyces griseus. Dihydro Streptomycin is obtained by catalytic hydrogenation of Streptomycin	*I. Hypersensitivity reactions :* 1. Skin : Urticaria Dermatitis. 2. Blood : (a) Aplastic anaemia (b) Eosinophilia. 3. Resp. system : Asthma. 4. Gastro-intestinal : (a) Nausea, (b) Vomiting. *II. Neurological manifestations.* 1. Vestibular involvement with Streptomycin 2. Cochlear manifestations with dihydro-Streptomycin. *III.* Resistance to Streptomycin is brought about by a single mutation by a single genetic change. This may be prevented by using with other antitubercular drugs.

The measures to combat toxicity: (1) The concurrent use of streptomycin and Dihydro Streptomycin: The dosage needed is half of the dosage of each singly and the toxic manifestations are reduced to the minimum. (2) The concurrent use of antihistamine. (3) In some cases with Neurological manifestations I have stopped the drug for a few days, put the patient on Vitamin B_1 and B_{12} and resumed the treatment along with Vitamins.

Third Group of Antibiotics: Tetracyclin Group. (a) Chlor Tetracyclin or Aureomycin. Discovered by Dr. Subba Rao and Dr. Duggar from

Streptomyces Aurofaciens. b) Oxytetracyclin or Terramycin: discovered by Dr. Finlay from Streptomyces rimosus. (c) Tetracyclin proper as Tetracyn or Steclin or Achromycin. The side reactions produced by this group are :- 1) Gastro-intestinal tract: irritation of the mucous membrane of the mouth, nausea vomiting and diarrhoea, Dr Avery Jones has shown that the resistant strains of Staphyloccocci in the intestines produces diarrhoea. The Staphylococcal enteritis is due to the toxins produced by micrococcus pyogenes. Normally these are inhibited by the normal intestinal flora. When the normal intestinal flora are destroyed by the Aureomycin or Terramycin then the other organisms as Micrococcus pyogenes which are present produce diarrhoea.

The various measures to combat the toxicity produced by the Tetracyclin group of drugs: (1) The S. F. or the addition of B Complex factors. The S.F. stands for stress formulae. The opinion is divided on the addition of B Complex factors to the antibiotics. I am in favour of this addition and I find that this addition is a great boon. (2) To prevent monoliasis the concurrent use of antifungal agents are recommended. The combination of Tetracyclin and Nystatin is useful. Dr. Andrew Wilson reviews the position of the place of antifungal agents with antibiotics. Dr. Lipnick, Dr. Kligman and Dr. Strauss opine that monoliasis is rare in patients treated with antibiotics. Dr. Shorp supports this opinion. Similar opinion is expressed by Dr. Delorenzo.

On the contrary the opinion of others seems to be that the addition of antifungal agent is beneficial. A report on the activity of two antifungal compounds, viz., Methyl Paraben and Propyl Paraben in doses of 90 mgm. and 22·5 mgm. respectively to one capsule (250 mgm.) of tetracylin has shown good results. Dr. Lechvalier has shown beneficial results with the addition of another antifungal agent called Candicidine. Systemic and even fatal moniliasis have been found to occur after long term use of Tetracycline group of antibiotics. Dr. J. C. Brown reports in J. A. M. A. volume 152, of five fatal cases. What is the position of Tetracycline S. F. and Mysteclin? In short term antibiotic therapy my opinion is for Tetracyclin S. F. Some one jocularly whispered to me that S.F. for Stress Formulae is a silly Formulae, since the adequate amount of B Complex factors are not present. The presence of one microgram of Vitamin B_{12} is too small. I think a more liberal formula is helpful. Otherwise an additional parenteral administration is needed to be an effective formulae. In long term therapy the combination of Tetracyclin and antifungal agent is one of choice.

Antibiotic IV:

Chloramphenicol: This was discovered by Burkholder of Yale University and is derived from Streptomyces Venezuela. The side reactions produced by Chloramphenicol are:— (1) Bitter taste in mouth, anorexia, nausea and vomiting. (2) Transient opthalmia has been noticed. (3) Gastro-intestinal upset. The concurrent administration of B Complex prevents the occurence of Gastro-intestinal upset. (4) The occurence of severe anaemia of the aplastic type and agranulocytosis has been reported after Chloramphenicol. During the last five years about 562 cases of Enteric have been followed with Chloramphenicol and not a single case of aplasia has been observed. The side reactions noted were: Total cases treated with Chloramphenicol and the toxic manifestations recorded:

1. 63 cases developed stomatitis and diarrhoea.

2. 6 cases had urticaria.

3. One patient had severe nausea after Chloramphenicol.

4. 17 cases of enteric had peripheral failure during treatment with Chloramphenicol. The concurrent use of A.C.T.H. and Chloramphenicol has been found to be better in the management of toxemia in enteric fever.

Antibiotic V. **Bacitracin**: This is derived from Bacillus subtilis and is discovered by Johnson, Anker and Meleny. The drug is found to produce nephrotoxicity.

VI. **Erythromycin**: This is derived from Streptomyces Erythreus and discovered by Mc Guire. It has recently been found that Erythromycin and Penicillin are antagonistic and cannot be used together. Toxic effect of Erythromycin is minimal. Few cases of nausea and vomiting have been reported.

The drug does not predisope to monilial infection. I have found three cases of contact dermatitis after Erythromycin ointment locally.

VII. **Poly Myxin**: This is derived from Bacillus Aerosporous of Greer. There are two variants in clinical use, viz., B & E. E is less toxic than B. The most dangerous side effect of Poly Myxin is Nephrotoxicity.

VIII. **Neomycin**: This is derived from Streptomyces Fradiae.

Toxicity:—1. Involves the cochlear portion of the 8th nerve.

2. Nephrotoxic.

IX. **Magnamycin or Carbomycin**: This antibiotic was discovered by Dr. Tanner from Streptomyces Halstedi. The toxicity has not yet been described.

X. **Tyrothricin**: This is derived from Streptomyces Bruis and is used more locally. The toxic manifestation is contact dermatitis.

XI. **Fumagillin**: is an antibiotic discovered by Drs. Eble and Hanson. Toxic manifestations are: (1) Nausea, (2) Cramping pains lower abdomen, (3) Abdominal distention and (4) Mild diarrhoea.

XII. **Albomycin**: was discovered by Dr. Gausa and derived from Actinomyces Subtropicus. This drug is good for cases of staphylococcal resistant to erythromycin and also in measles. No side reactions have been noticed.

XIII. **Actinomycin C**: This antibiotic is useful in chronic lymphatic leukemia in doses of 100 mcgm. daily to a total of 5000 mcgm. Toxicity. Diarrhoea and Venospasm.

XIV. **Viomycin**: is a latest antitubercular drug and antibiotic and has the place of choice in resistant types of tuberculosis. The toxic manifestations are:—(1) pain at the sight of injection, (2) rash and malaise, (3) vertigo & (4) tinnitus.

I have ventured to give a resume of the antibiotics and possibly there are many more to be learned by our experience and the experience of others. Hence we must aspire for more knowledge and we must be very familiar with not only the uses of the antibiotics but also the hazards. In this let me conclude quoting Lord Tennyson:

Who loves not knowledge? Who shall rail against her beauty? May she mix

With men and prosper? Who shall fix her pillars? Let her work prevail.

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ELECTION TO THE INDIAN MEDICAL COUNCIL.

At the request of several of my friends, in the Andhra and Madras Universities, I am standing for election to the Membership of the Indian Medical Council, New Delhi. I appeal to all the Medical Graduates in Andhra, Madras, Travancore and Cochin States to return me to the Council and thereby give me an opportunity to serve them as their representative.

Dr. K. Narayanamurthy, M.D.,
Member, Madras Medical Council.

ERRATUM

We regret to inform our readers a mistake in the May issue of the Madras Clinical Journal, at the last paragraph of the article on "Shock in Obstetrics" page 118. It is stated that the total volume being only 100 c. c. This should be 1000 c. c. We regret for the mistake and hasten to correct the same.

Managing Editor.

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MADRAS

ASSOCIATION NEWS

INDIAN MEDICAL ASSOCIATION

MADRAS STATE BRANCH

Minutes of the meeting of the Council of the Madras State Branch, Indian Medical Association, held at the District Club, Palayamkottai, Tirunelveli, on Sunday the 19th February, 1956 at 9 a. m.

Dr. Y. P. Vasudevan presided. 20 members were Present.

24 members have sent messages expressing their inability to attend the State Council Meeting.

Co-option of two members: As per Rule 7 (c) the President co-opted Dr. K. Ramachandra Naidu, L.M.&S., and Dr. R. Gopalan, BA., MBBS., of Tirunelveli for this meeting of the council.

Condolence Resolution: "This meeting of the State Council of the Madras State Branch of the Indian Medical Association places on record its deep sense of sorrow at the deaths of Dr Arthur Joseph, a member of the Tirunelveli Branch, Dr. T. S. Dakshinamurthi, a member of the Nilgiris Branch and Dr. R. Devadas, a member of the Madurai Branch and requests the Honorary Secretary of the State Branch to convey this resolution to the members of the bereaved families through the respective District Branches of I. M. A."

Business arising out of the previous Council Meeting.

Municipal Licence for X-Ray plants and connected matters.

The Honorary Secretary informed the House that in pursuance of the resolution passed by the council at its last meeting as well as the 10th Madras State Medical Conference of I M. A. held at Salem, he had interviewed the Minister for Public-Health with Government of Madras and other officers of Government and explained to them the necessity for exempting medical men owning X-Ray apparatus from obtaining a licence from the Municipal or other Local Authorities. He informed the House that from the general trend of the discussions there was every possibility of the request being favourably considered.

Statement of accounts for the months of November and December, 1955, and January 1956.

The statements were accepted and adopted by the House.

Resolution sponsored by the Anamalai Branch, I. M. A. Re: according full facilities for Licentiates in Modern Scientific System of Medicine to appear for Diploma courses in all branches of medicine like D. G. O., D. T. M & H., L. C. R. P., etc., in foregin countries and permitting all Graduates in Medicine to sit directly for post-graduate examinations like M. D., M. S., as against the procedure of selection adopted now.

The President informed the House that the Central Office is taking up the matter on All-India level and as far as the procedure adopted by the Madras University for selecting candidates for M. D. and M. S. courses, the University is not willing to the change the present procedure. Hence the Council decided to wait for the results and till such time

it was decided to postpone further consideration of the subject.

Incidence of Infective Hepatitis in the Madras State from imported cases from Delhi-statistics and other particulars required by the Director of Medical Services, Madras correspondence pertaining to.

The Hony. Secretary informed the House that under instructions from the President of the Madras State Branch who was addressed in a D. O., by the Director of Medical Services, Madras. for information regarding cases of Infective Hepatitis in Madras State to be furnished to the Director-General of Medical Services, Delhi, he had issued circulars to all the branches of I. M. A., to report cases of Infective Hepatitis, if any, that might have occured in their areas arising from imported cases from Delhi. The circular was issued with a view to gather as much information as possible and furnish the same to the Government of India who desired to have a comprehensive investigation including epidemiologial survey of these disease made under the auspices of the Indian Council of Medical Research. In order to attract the attention of even the remotest medical practitioners in the State, the Hony. Secretary had also caused an appeal in terms of the circular to be published in the Dailies and the appeal was published by 'The Hindu' in its issue dated 17th January 1956. Inspite of the efforts taken in this direction, the Hony. Secretary said that none of the branches sent any information regarding the incidence or otherwise of the disease. Only one report came from the District Medical Officer of the Southern Railway, at Golden Rock, and this was immediately forwarded to the Director of Medical Services, Madras. It is hoped that the local branches would realise the urgency and importance for which circulars are issued by the State Branch and do their best to aid the State Branch in compiling information on such important subjects affecting the Nation.

Election of Office-bearers of the Indian Medical Association, Central Office, Delhi, for the year 1955-56.

"This Council congratulates Dr. T. S. Balasubramaniam, M. B. B. S. of Tiruchirappalli Branch on his election as one of the Assistant Secretaries of the Indian Medical Association, Central Office".

Selection of a Delegate from the members of the I. M. A., to represent the Indian Medical Association to attend the Annual Meeting of the British Medical Association at Brighton at his own cost-Willingness of any member of I. M. A. - letter dated 13—1—1956 from the Central Office.

"This meeting of the Council of the Madras State Branch, I. M. A., after persuing the contents of Circular No. 13/55-56 dated 13—1—56 received from the Central Office, Delhi, regarding selection of a delegate to represent the Indian Medical Association at the Annual Meeting of the British Medical Association to be held at Brighton during July 1956 resolves to recommend Dr. M.G. Nair, M. B. B. S., T. D. D. (Mad.) T. D. D. (Wales) of Coimbatore as a representative of the Madras State Branch, I.M.A., and requests the Hony. Secretary, Madras State Branch, I.M.A., to communicate the selection to the Central Office for further action."

Decision of the Working Committee of the I. M. A., Central Office, regarding making a provision in All-India Code of Medical Ethics, requiring medical practitioners to obtain the signatures or thumb impressions of persons to whom medical certificates of sickness are granted as a measure of safe-guard and

for future identification purposes-letter from the Central Office dated 13-1-1956.

The Hony. Secretary placed before the House the letter from the Central Office containing the decision of 'the Working Committee, I. M. A., on the above subject. The Council recorded the same and decided to recommend to the practitioners to adopt the suggestion put forth is mostly in practice in this part of the State already.

International Certificates of vaccination and Inoculation-Forms supply of - letter dated 29—12—1955 from the Director of Medical Services, Madras.

The Hony. Secretary placed before the House the letter of the Director of Medical Services Madras, asking for information as to how many forms of certificates of Vaccination and Inoculation to be issued to international Travellers would be required, and informed the House that he has indented for 1000 forms for the use of the members of the Madras State Branch, I. M. A., and that the forms will be avaible for use of the members at the rate of 1 anna each, soon after they are received from the Director of Medical Services, Madras.

Decision of the Government to make available copies of every issue of the Medical Bulletin to private medical practitioners provided they register their names before hand with the Hony. Secretary, Madras State Branch of I. M. A. - letter dated 4-1-1956 from the Director of Medical Services, Madras, on the decision.

The Council after taking into consideration all the points and while welcoming the decision of the Government to make the State Branch an agency for the distribution of the Medical Bulletin to non-members of the Association and members of the profession with modern registrable medical qualifications, decided that the State Branch should take advantage of this position and enhance its membership by prevailing upon those non-members who apply for being registered for the regular supply of the Medical Bulletin to become members of the I. M. A. The Hony. Secretary was requested to implement the decision and do the needful in the matter by way of membership campagin.

Quacks styling themselves as Doctors and practising Medicine - Opinion of the Council regarding restriction of prevention.

The Hony. Secretary informed the House that when he interviewed the Minister for Public Health, Government of Madras, on Association matters, the Minister wanted the help of the Association to find out ways and means to prevent uuqualified persons styling as Doctors and practising medicine. He also informed the House that he gave to the Minister various resolutions passed by the I. M. A. on the subject and promised to place the same in the state Council Meeting. Hence he wanted the members to think over the matter and give concrete proposals so that a decision can be taken on the subject at the next Council meeting to be communicated to the Minister.

Voluntary Prepayment Medical care Plan-letter d/4-2-1956 from Dr. M. R. Bhat of Thuraiyur, Tiruchirapalli Dt.

"This Council appreciates the move initiated by Dr. M. R. Bhat of Thuraiyur as regards the Voluntary Prepayment Medical Care Plan and wishes him all success in his endeavours; but feels that the Indian Medical Association, as a body, is not in a position to implement the move. The Council has, however, no objection to indivi-

dual members emulating the example of Dr. Bhat on their own initiative."

" This Council of the Madras State Branch of the Indian Medical Association, after a deep consideration of the subject before it, decides that the Managing Editor of The Madras Clinical Journal, the journal of the Madra State Branch, I. M. A., be requested to allot two pages in each issue of Madras Clinical Journal and one page in any of its four cover pages for publication of Council Notes Circulars and other matters that the Hony. Secretary of the Madras State Branch may send from time to time."

Statement of Receipts and payments of The Miscellany from 29-10-1954 to 13-12-1955.

The audited statement of Receipts and Payments of the Miscellany, now The Madras Clinical Journal. the offical orgrn of the Madras State Branch, for the period 29-10-1954 to 31-12-1955 sent by the Managing Editor was placed before the House and the same was adopted. The statement of Accounts revealed a small surplus after meeting all the expenditure incidental to the publication of the Journal, and though as per original understanding the State Branch is entitled for half of the profits, the Hony. Secretary suggested to the Council not to press for the 50% profits due to the State Branch for its share this year. He further brought to the notice of the Council that this is the first time there was a profit ever since the Journal was adopted as the official organ of the State Branch and he congratulated the Managing Editor in his efforts to show a savings.

Organising of a cyclone Relief Fund by the Madras State Branch of I.M.A., as per President's instructions on the letter dated 12-12-1955 of Dr. D. V. Venkappa of Madras, and connected matters.

On the suggestion of the President it was decided to keep the amount collected so far and the amount that may be received subsequently, as a separate fund to be utlised for relief on future occasions when need arises.

Detail of collections for the Fund.

Contribution received from Tirunelveli Branch I. M. A.		100	0	0
,, Nilgiris Branch,	,,	50	0	0
,, Madurai Branch,	,,	350	0	0
,, Anamalai Branch	,,	59	0	0
,, Chingleput ,,	,,	47	0	0
,, Coimbatore ,,	,,	186	0	0
Total —	Rs.	792	0	0

Working conditions of the Assistant Medical Officers in Tea Gardens–letter dated 3—2—1956 from Central Office.

" This Council, after a thorough consideration of the conditions under which the Medical Officers in the Tea Gardens in this State are working, resolves to recommend to the concerned authorities to regulate the pay and other emoluments of such Medical Officers to be in accordance with the covenanted medical officers' service conditions and to constitute, if need be, a Services Commission on the analogy of the general Public Services Commission to deal with recruitment, service conditions etc,"

The Eleventh Madras State Medical Conference - Venue of.

The Hon. Secretary informed the house that in accordance with the decision of the Council at its last meeting held at Salem that he issued circulars to all the Hony. Secretaries of the constituent branches calling

for information whether any of them was prepared to invite the Eleventh Madras State Medical Conference as against the invitation already extended by the Tiruchirapalli Branch, I.M.A. The Hony. Secretary reported to the House that no other Branch was willing to invite the Conference this year excepting the Tiruchirapalli Branch. The House, after considering the further representation made by the members of the Tiruchirapalli Branch, decided to accept the invitation of the Tiruchirapalli Branch for holding the Eleventh Madras State Medical Conference, 1956, at Tiruchirapalli and communicated the same to the Hony. Secretary, Tiruchirapalli Branch, I. M. A., who was present at the Council Meeting.

Circulars of the Indian Indian Medical Association, Central Office were read and recorded.

Circulars of the Madras State Branch were read and recorded.

Vote of Thanks.

"This Council expresses its great appreciation and sincere thanks for the excellent arrangements made by the Tirunelveli District Branch, I. M. A., for holding the meeting of the State Council on 19-2-1956 at Tirunelveli as well as for the boarding and lodging of the members of the State Council attending the meeting."

The meeting terminated at 12 noon.

(Sd.) **Y. P. Vasudevan.**
President.

(Sd.) **R. Sankaran, L. M. P.,**
Hony. Secretary.

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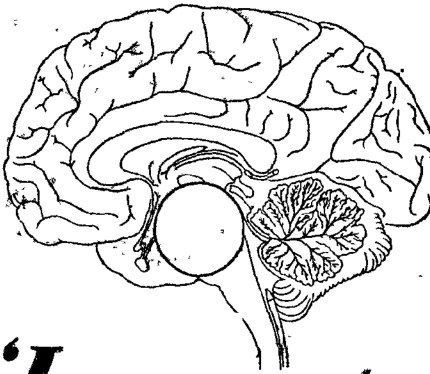

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ANNOUNCEMENT

150 copies of the Medical Bulletin, Sixth issue, of January 1956, have been received from Director of Medical Services, Madras, and are ready for supply to the members and non-members of the Indian Medical Association belonging to the Medical Profession. Those desirous of having a copy of the sixth issue of the Medical Bulletin of January 1956 may send a requisition for the same to the Hony. Secretary Indian Medical Association, Madras State Branch, No. 6, Rajabadhar Mudaliar Road, Thyagarayanagar, Madras 17, enclosing SIX ANNAS postage stamps towards the cost of each copy of the Bulletin required inclusive of postage and incidental charges.

150 copies of No. 5, 140 copies of No. 4 and 15 copies of No. 3 of the Medical Bulletin are also available at the same rate for those who wish to have them.

Copies of the Medical Bulletin No. 6 have already been despatched to those who have registered their names for the regular supply of the Medical Bulletin by remitting Rs. 1—8—0 to cover the cost of four issues at a time.

Medical Bulletin Nos. 1 and 2 are not available as they have not been supplied by the Director of Medical Services, Madras, on the ground that they are not priced for sale.

R. SANKARAN, L.M.P.,

Hony. Secretary, Madras State Branch

APPEAL

Almost all members of the Medical Professiou are aware of the genial disposition and pleasant manners and the fund of professional experience of the late Dr. J. A. S. Masilamani, M.D., of Madras, whose sudden death has caused an irreparable void in the ranks of the medical profession. It is most unfortunate that the Knighthood of the Order of Saint Sylvester conferred upon him had to be awarded posthumously to his wife. The admirers, friends and colleagues of the late doctor have decided to have a memorial in memory of the late Dr. J. A. S. Masilamani, and a committee of Organisers consisting of Dr. K.M. Rai, Dr. A. Lakshmanaswami Mudaliar, Dr. P. V. Cherian, Dr. P. Vadamalayan and others have issued an Appeal for Funds to have a suitable memorial. In furtherance of the efforts of the Committee of Organisers all the members of the medical profession are earnestly requested to contribute their mite to make it a grand success. All contributions may kindly be sent to either of the following members of the Committee :—

Dr. P. Vadamalayan, M.B.B.S.,
194, Palace Road, Madurai.

or

Dr. P. V. Cherian, MBBS., DLO., FRFPS. (Glas). FRCS (Edin).
14, Marshalls Road, Egmore, Madras-8.

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